

What is claimed is:

1. A method for forming a substantially isodiametric lead having a prescribed diameter and at least one electrode separated from at least one terminal by a lead body, wherein the at least one electrode is electrically coupled to the at least one terminal by a conductor passing through a passage defined by the lead body,
5 comprising the steps of:
assembling the at least one electrode and the at least one terminal relative to the lead body to form an assembly, including connecting the at least one electrode to the at least one terminal via the conductor;
10 over-molding the assembly with a first material to form an intermediate assembly, wherein the first material is compatible with and has mechanical properties consistent with a material of the lead body; and
removing all material of the intermediate assembly in excess of the prescribed diameter.
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2. A method in accordance with Claim 1, wherein the at least one electrode has an outer diameter greater than the prescribed diameter prior to the removing step.
3. A method in accordance with Claim 1, wherein the at least one terminal has an outer diameter greater than the prescribed diameter prior to the removing step.
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4. A method in accordance with Claim 1, wherein the removing step
25 involves subjecting the intermediate assembly to at least a centerless grinding process.

5. A method for forming a substantially isodiametric lead having a prescribed diameter and a first region separated from a second region by a lead body, the first region having a plurality of electrodes, and the second region having a plurality of terminals, each terminal being respectively and electrically joined to at least one electrode by a conductor passing through a passage defined by the first region, second region, and lead body, comprising the steps of:

assembling the plurality of electrodes and plurality of terminals relative to the lead body to form an assembly, this step including electrically coupling each terminal to at least one electrode by a conductor; and

unitizing at least that portion of the assembly corresponding to the first region of the lead, wherein subsequent to unitization, each electrode is separated by an insulative material, and the passage defined by at least the first region is substantially filled with the insulative material.

6. A method in accordance with Claim 5, further comprising unitizing that portion of the assembly corresponding to the second region of the lead, wherein subsequent to unitization, each terminal is separated by a second insulative material, and the passage defined by at least the first region is substantially filled with the second insulative material.

7. A method in accordance with Claim 6, wherein the second insulative material has mechanical properties consistent with the material of the lead body.

8. A method in accordance with Claim 5, wherein the insulative material has mechanical properties consistent with the material of the lead body.

9. A method for forming a substantially isodiametric lead having a prescribed diameter and a first region separated from a second region by a lead body, the first region having a plurality of electrodes, and the second region having a plurality of terminals, each terminal being respectively and electrically joined to at least one electrode by a conductor passing through a passage defined by the first region, second region, and lead body, comprising the steps of:

assembling the plurality of electrodes and plurality of terminals relative to the lead body to form an assembly, this step including electrically coupling each terminal to at least one electrode by a conductor; and

unitizing at least that portion of the assembly corresponding to the first region of the lead, wherein each electrode is separated by an insulative material, and the passage defined by at least the first region is substantially filled with the insulative material,

wherein the step of unitizing involves over-molding the assembly with a second material to form an intermediate assembly, wherein the second material is compatible with and has mechanical properties consistent with the material of the lead body.

10. A method in accordance with Claim 9, wherein the second material and the insulative material are the same.

11. A method in accordance with Claim 9, further comprising the step of removing all material of the intermediate assembly in excess of the prescribed diameter.

12. A method in accordance with Claim 11, wherein the step of removing involves subjecting the intermediate assembly to at least a centerless grinding process.

13. A method in accordance with Claim 11, wherein the at least one electrode has an outer diameter greater than the prescribed diameter prior to the removing step.

- 5 14. A method in accordance with Claim 11, wherein the at least one terminal has an outer diameter greater than the prescribed diameter prior to the removing step.

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